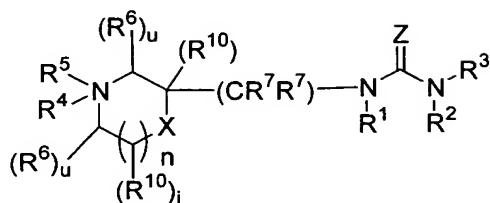


What is Claimed is:

1. A compound of formula (I):



(I)

or stereoisomers or pharmaceutically acceptable salts thereof, wherein:

Z is selected from O, S, N(R<sup>d</sup>), C(CN)<sub>2</sub>, CH(NO<sub>2</sub>), and CH(CN);

X is C(R<sup>8</sup>)(R<sup>9</sup>);

R<sup>1</sup> and R<sup>2</sup> are independently selected from H, C<sub>1-8</sub> alkyl, C<sub>2-8</sub> alkenyl, and C<sub>2-8</sub> alkynyl;

R<sup>d</sup> is selected from H, C<sub>1-6</sub> alkyl, C<sub>3-6</sub> cycloalkyl, CON(R<sup>f</sup>)R<sup>f</sup>, OR<sup>e</sup>, CN, NO<sub>2</sub>, and (CH<sub>2</sub>)<sub>r</sub>-phenyl substituted with 0-3 R<sup>18</sup>;

R<sup>e</sup>, at each occurrence, is independently selected from H, C<sub>1-6</sub> alkyl, C<sub>3-6</sub> cycloalkyl, and phenyl substituted with 0-3 R<sup>18</sup>;

R<sup>f</sup>, at each occurrence, is independently selected from H, C<sub>1-6</sub> alkyl, C<sub>3-6</sub> cycloalkyl, and phenyl substituted with 0-3 R<sup>18</sup>, or optionally, two R<sup>f</sup> may be taken together with the nitrogen to which both are

attached to form a pyrrolidine, piperidine,  
piperazine or morpholine ring;

$R^3$  is selected from a  $(CR^{3'}R^{3'})_r-C_{3-6}$  carbocyclic residue  
5 substituted with 0-5  $R^{15}$  and a  $(CR^{3'}R^{3'})_r-5-10$   
membered heterocyclic system containing 1-4  
heteroatoms selected from N, O, and S, substituted  
with 0-3  $R^{15}$ , with the proviso that the heterocyclic  
residue is not cycloheptimidazolyl;

10

$R^{3'}$ , at each occurrence, is independently selected from  
H,  $C_{1-6}$  alkyl,  $(CH_2)_rC_{3-6}$  cycloalkyl, and phenyl;

$R^4$  is absent, taken with the nitrogen to which it is  
15 attached to form an N-oxide, or selected from  $C_{1-8}$   
alkyl,  $C_{2-8}$  alkenyl,  $C_{2-8}$  alkynyl,  $(CH_2)_rC_{3-6}$   
cycloalkyl,  $(CH_2)_qC(O)R^{4b}$ ,  $(CH_2)_qC(O)NR^{4a}R^{4a}$ ,  
 $(CH_2)_qC(O)OR^{4b}$ , and a  $(CH_2)_r-C_{3-6}$  carbocyclic residue  
substituted with 0-3  $R^{4C}$ ;

20

$R^{4a}$ , at each occurrence, is independently selected from  
H,  $C_{1-6}$  alkyl,  $(CH_2)_rC_{3-6}$  cycloalkyl, and phenyl;

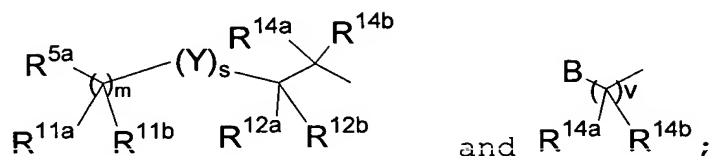
$R^{4b}$ , at each occurrence, is independently selected from  
25  $C_{1-6}$  alkyl,  $C_{2-8}$  alkenyl,  $(CH_2)_rC_{3-6}$  cycloalkyl,  $C_{2-8}$   
alkynyl, and phenyl;

$R^{4C}$ , at each occurrence, is independently selected from  
 $C_{1-6}$  alkyl,  $C_{2-8}$  alkenyl,  $C_{2-8}$  alkynyl,  $C_{3-6}$   
30 cycloalkyl, Cl, F, Br, I, CN,  $NO_2$ ,  $(CF_2)_rCF_3$ ,

$(\text{CH}_2)_r\text{OC}_{1-5}$  alkyl,  $(\text{CH}_2)_r\text{OH}$ ,  $(\text{CH}_2)_r\text{SC}_{1-5}$  alkyl,  
 $(\text{CH}_2)_r\text{NR}^{4a}\text{R}^{4a}$ , and  $(\text{CH}_2)_r\text{phenyl}$ ;

$\text{R}^5$  is selected from

5



$\text{Y}$  is selected from  $\text{O}$ ,  $\text{N}(\text{R}^{25})$ ,  $\text{S}$ ,  $\text{S}(\text{O})$ , and  $\text{S}(\text{O})_2$ ;

- 10 ring B is a 5-7 membered cycloalkyl ring optionally  
 containing a  $\text{C}=\text{O}$ , and being substituted with 0-2  
 $\text{R}^{11a}$ , wherein the cycloalkyl is fused with a benzo  
 group substituted with 0-3  $\text{R}^{16}$  or is fused with a 5-6  
 membered aromatic heterocyclic ring having 0-3 N,  
 15 0-1 O, or 0-1 S, the heterocyclic ring being  
 substituted with 0-3  $\text{R}^{16}$ ;

- alternatively, ring B is a fused 5-7 membered saturated  
 heterocyclic ring containing 0-1 O,  $\text{N}(\text{R}^{16})$ , S,  $\text{S}(\text{O})$ ,  
 20 and  $\text{S}(\text{O})_2$ , substituted with 0-2  $\text{R}^{11a}$ , the  
 heterocyclic ring being fused with a benzo group  
 substituted with 0-3  $\text{R}^{16}$  or is fused with a 5-6  
 membered heterocyclic ring having 0-3 N, 0-1 O, or  
 0-1 S, the heterocyclic ring being substituted with  
 25 0-3  $\text{R}^{16}$ ;

provided that if ring B is a heterocyclic ring, then the  
 number of carbon atoms separating the heteroatom of

ring B and the nitrogen atom of structure (I) bonded to R<sup>5</sup> is at least 2;

R<sup>5a</sup> is selected from a C<sub>3-10</sub> carbocyclic residue

5 substituted with 0-5 R<sup>16</sup>, and a 5-10 membered heterocyclic residue containing 1-4 heteroatoms selected from N, O, and S, substituted with 0-3 R<sup>16</sup>;

10 R<sup>6</sup>, at each occurrence, is independently selected from C<sub>1-6</sub> alkyl, C<sub>2-8</sub> alkenyl, C<sub>2-8</sub> alkynyl, (CH<sub>2</sub>)<sub>r</sub>C<sub>3-6</sub> cycloalkyl, (CF<sub>2</sub>)<sub>r</sub>CF<sub>3</sub>, CN, (CH<sub>2</sub>)<sub>r</sub>NR<sup>6a</sup>R<sup>6a</sup>, (CH<sub>2</sub>)<sub>q</sub>OH, (CH<sub>2</sub>)<sub>q</sub>OR<sup>6b</sup>, (CH<sub>2</sub>)<sub>q</sub>SH, (CH<sub>2</sub>)<sub>q</sub>SR<sup>6b</sup>, (CH<sub>2</sub>)<sub>r</sub>C(O)OH, (CH<sub>2</sub>)<sub>r</sub>C(O)R<sup>6b</sup>, (CH<sub>2</sub>)<sub>r</sub>C(O)NR<sup>6a</sup>R<sup>6a</sup>, (CH<sub>2</sub>)<sub>q</sub>NR<sup>6d</sup>C(O)R<sup>6a</sup>, (CH<sub>2</sub>)<sub>r</sub>C(O)OR<sup>6b</sup>, (CH<sub>2</sub>)<sub>q</sub>OC(O)R<sup>6b</sup>, (CH<sub>2</sub>)<sub>r</sub>S(O)<sub>p</sub>R<sup>6b</sup>,  
15 (CH<sub>2</sub>)<sub>r</sub>S(O)<sub>2</sub>NR<sup>6a</sup>R<sup>6a</sup>, (CH<sub>2</sub>)<sub>r</sub>NR<sup>6d</sup>S(O)<sub>2</sub>R<sup>6b</sup>, and (CH<sub>2</sub>)<sub>t</sub>phenyl substituted with 0-3 R<sup>6c</sup>;

R<sup>6a</sup>, at each occurrence, is independently selected from H, C<sub>1-6</sub> alkyl, C<sub>3-6</sub> cycloalkyl, and phenyl  
20 substituted with 0-3 R<sup>6c</sup>;

R<sup>6b</sup>, at each occurrence, is independently selected from C<sub>1-6</sub> alkyl, C<sub>3-6</sub> cycloalkyl, and phenyl substituted with 0-3 R<sup>6c</sup>;

25 R<sup>6c</sup>, at each occurrence, is independently selected from C<sub>1-6</sub> alkyl, C<sub>3-6</sub> cycloalkyl, Cl, F, Br, I, CN, NO<sub>2</sub>, (CF<sub>2</sub>)<sub>r</sub>CF<sub>3</sub>, (CH<sub>2</sub>)<sub>r</sub>OC<sub>1-5</sub> alkyl, (CH<sub>2</sub>)<sub>r</sub>OH, (CH<sub>2</sub>)<sub>r</sub>SC<sub>1-5</sub> alkyl, and (CH<sub>2</sub>)<sub>r</sub>NR<sup>6d</sup>R<sup>6d</sup>;

$R^{6d}$ , at each occurrence, is independently selected from H,  $C_{1-6}$  alkyl, and  $C_{3-6}$  cycloalkyl;

5  $R^7$ , at each occurrence, is independently selected from H,  $C_{1-6}$  alkyl,  $C_{2-8}$  alkenyl,  $C_{2-8}$  alkynyl,  $(CH_2)_qOH$ ,  $(CH_2)_qSH$ ,  $(CH_2)_qOR^{7d}$ ,  $(CH_2)_qSR^{7d}$ ,  $(CH_2)_qNR^{7a}R^{7a}$ ,  $(CH_2)_rC(O)OH$ ,  $(CH_2)_rC(O)R^{7b}$ ,  $(CH_2)_rC(O)NR^{7a}R^{7a}$ ,  $(CH_2)_qNR^{7a}C(O)R^{7a}$ ,  $(CH_2)_qNR^{7a}C(O)H$ ,  $(CH_2)_rC(O)OR^{7b}$ ,  
 10  $(CH_2)_qOC(O)R^{7b}$ ,  $(CH_2)_qS(O)_pR^{7b}$ ,  $(CH_2)_qS(O)_2NR^{7a}R^{7a}$ ,  $(CH_2)_qNR^{7a}S(O)_2R^{7b}$ ,  $C_{1-6}$  haloalkyl, a  $(CH_2)_r-C_{3-6}$  carbocyclic residue substituted with 0-3  $R^{7c}$ , and a  $(CH_2)_r-5-10$  membered heterocyclic system containing 1-4 heteroatoms selected from N, O, and S,  
 15 substituted with 0-2  $R^{7c}$ ;

$R^{7a}$ , at each occurrence, is independently selected from H,  $C_{1-6}$  alkyl,  $C_{2-8}$  alkenyl,  $C_{2-8}$  alkynyl, a  $(CH_2)_r-C_{3-6}$  carbocyclic residue substituted with 0-5  $R^{7e}$ ,  
 20 and a  $(CH_2)_r-5-10$  membered heterocyclic system containing 1-4 heteroatoms selected from N, O, and S, substituted with 0-3  $R^{7e}$ ;

$R^{7b}$ , at each occurrence, is independently selected from  
 25  $C_{1-6}$  alkyl,  $C_{2-8}$  alkenyl,  $C_{2-8}$  alkynyl, a  $(CH_2)_r-C_{3-6}$  carbocyclic residue substituted with 0-2  $R^{7e}$ , and a  $(CH_2)_r-5-6$  membered heterocyclic system containing 1-4 heteroatoms selected from N, O, and S, substituted with 0-3  $R^{7e}$ ;

$R^{7c}$ , at each occurrence, is independently selected from  
 $C_{1-6}$  alkyl,  $C_{2-8}$  alkenyl,  $C_{2-8}$  alkynyl,  $(CH_2)_rC_{3-6}$   
cycloalkyl, Cl, Br, I, F,  $(CF_2)_rCF_3$ ,  $NO_2$ , CN,  
5  $(CH_2)_rNR^{7f}R^{7f}$ ,  $(CH_2)_rOH$ ,  $(CH_2)_rOC_{1-4}$  alkyl,  $(CH_2)_rSC_{1-4}$   
alkyl,  $(CH_2)_rC(O)OH$ ,  $(CH_2)_rC(O)R^{7b}$ ,  $(CH_2)_rC(O)NR^{7f}R^{7f}$ ,  
 $(CH_2)_rNR^{7f}C(O)R^{7a}$ ,  $(CH_2)_rC(O)OC_{1-4}$  alkyl,  
 $(CH_2)_rOC(O)R^{7b}$ ,  $(CH_2)_rC(=NR^{7f})NR^{7f}R^{7f}$ ,  $(CH_2)_rS(O)_pR^{7b}$ ,  
 $(CH_2)_rNHC(=NR^{7f})NR^{7f}R^{7f}$ ,  $(CH_2)_rS(O)_2NR^{7f}R^{7f}$ ,  
10  $(CH_2)_rNR^{7f}S(O)_2R^{7b}$ , and  $(CH_2)_r$ phenyl substituted with  
0-3  $R^{7e}$ ;

$R^{7d}$ , at each occurrence, is independently selected from  
 $C_{1-6}$  alkyl substituted with 0-3  $R^{7e}$ , alkenyl,  
15 alkynyl, and a  $C_{3-6}$  carbocyclic residue substituted  
with 0-3  $R^{7c}$ ;

$R^{7e}$ , at each occurrence, is independently selected from  
 $C_{1-6}$  alkyl,  $C_{2-8}$  alkenyl,  $C_{2-8}$  alkynyl,  $C_{3-6}$   
20 cycloalkyl, Cl, F, Br, I, CN,  $NO_2$ ,  $(CF_2)_rCF_3$ ,  
 $(CH_2)_rOC_{1-5}$  alkyl, OH, SH,  $(CH_2)_rSC_{1-5}$  alkyl,  
 $(CH_2)_rNR^{7f}R^{7f}$ , and  $(CH_2)_r$ phenyl;

$R^{7f}$ , at each occurrence, is independently selected from  
25 H,  $C_{1-6}$  alkyl, and  $C_{3-6}$  cycloalkyl;

$R^8$  is selected from H,  $C_{1-6}$  alkyl,  $C_{2-8}$  alkenyl,  $C_{2-8}$   
alkynyl,  $(CH_2)_rC_{3-6}$  cycloalkyl,  $(CF_2)_rCF_3$ ,  
 $(CH_2)_rN(R^{18a})R^{18b}$ ,  $(CH_2)_rOH$ ,  $(CH_2)_rOR^{19}$ ,  $(CH_2)_rSH$ ,

$(\text{CH}_2)_r\text{SR}^{19}$ ,  $(\text{CH}_2)_r\text{C}(\text{O})\text{OH}$ ,  $(\text{CH}_2)_r\text{C}(\text{O})\text{R}^{19}$ ,  
 $(\text{CH}_2)_r\text{C}(\text{O})\text{N}(\text{R}^{18a})\text{R}^{18b}$ ,  $(\text{CH}_2)_r\text{N}(\text{R}^{18c})\text{C}(\text{O})\text{R}^{19}$ ,  
 $(\text{CH}_2)_r\text{C}(\text{O})\text{OR}^{19}$ ,  $(\text{CH}_2)_r\text{OC}(\text{O})\text{R}^{19}$ ,  $(\text{CH}_2)_r\text{S}(\text{O})\text{R}^{19}$ ,  
 $(\text{CH}_2)_r\text{S}(\text{O})_2\text{R}^{19}$ ,  $(\text{CH}_2)_r\text{S}(\text{O})_2\text{N}(\text{R}^{18a})\text{R}^{18b}$ ,  
5  $(\text{CH}_2)_r\text{N}(\text{R}^{18c})\text{S}(\text{O})_2\text{R}^{19}$ , a  $(\text{C}(\text{R}^{8a})(\text{R}^{8b}))_r\text{-C}_3\text{-10}$   
carbocyclic residue substituted with 0-5  $\text{R}^{17}$ , and a  
 $(\text{C}(\text{R}^{8a})(\text{R}^{8b}))_r\text{-5-10}$  membered heterocyclic system  
containing 1-4 heteroatoms selected from N, O, and  
S, substituted with 0-3  $\text{R}^{17}$ ;

10

$\text{R}^{8a}$  and  $\text{R}^{8b}$ , at each occurrence, are independently  
selected from H,  $\text{C}_{1-6}$  alkyl,  $(\text{CH}_2)_r\text{C}_{3-6}$  cycloalkyl,  
and  $(\text{CH}_2)_r$  phenyl substituted with 0-3  $\text{R}^{18}$ ;

15  $\text{R}^9$  is selected from H,  $\text{C}_{1-6}$  alkyl,  $\text{C}_{2-8}$  alkenyl,  $\text{C}_{2-8}$   
alkynyl,  $(\text{CH}_2)_r\text{C}_{3-6}$  cycloalkyl,  $(\text{CF}_2)_r\text{CF}_3$ ,  
 $(\text{CH}_2)_q\text{N}(\text{R}^{18a})\text{R}^{18b}$ ,  $(\text{CH}_2)_q\text{OH}$ ,  $(\text{CH}_2)_q\text{OR}^{19}$ ,  $(\text{CH}_2)_q\text{SH}$ ,  
 $(\text{CH}_2)_q\text{SR}^{19}$ ,  $(\text{CH}_2)_q\text{C}(\text{O})\text{OH}$ ,  $(\text{CH}_2)_q\text{C}(\text{O})\text{R}^{19}$ ,  
 $(\text{CH}_2)_q\text{C}(\text{O})\text{N}(\text{R}^{18a})\text{R}^{18b}$ ,  $(\text{CH}_2)_q\text{N}(\text{R}^{18c})\text{C}(\text{O})\text{R}^{19}$ ,  
20  $(\text{CH}_2)_q\text{C}(\text{O})\text{OR}^{19}$ ,  $(\text{CH}_2)_q\text{OC}(\text{O})\text{R}^{19}$ ,  $(\text{CH}_2)_q\text{S}(\text{O})\text{R}^{19}$ ,  
 $(\text{CH}_2)_q\text{S}(\text{O})_2\text{R}^{19}$ ,  $(\text{CH}_2)_q\text{S}(\text{O})_2\text{N}(\text{R}^{18a})\text{R}^{18b}$ ,  
 $(\text{CH}_2)_q\text{N}(\text{R}^{18c})\text{S}(\text{O})_2\text{R}^{19}$ , a  $(\text{C}(\text{R}^{8a})(\text{R}^{8b}))_r\text{-C}_3\text{-10}$   
carbocyclic residue substituted with 0-5  $\text{R}^{17}$ , and a  
 $(\text{C}(\text{R}^{8a})(\text{R}^{8b}))_r\text{-5-10}$  membered heterocyclic system  
25 containing 1-4 heteroatoms selected from N, O, and  
S, substituted with 0-3  $\text{R}^{17}$ ;

alternatively,  $\text{R}^8$  and  $\text{R}^9$  taken together are selected from  
 $=\text{O}$ ,  $=\text{S}$ ,  $=\text{NR}^{9a}$ ;

- $R^{9a}$  is selected from H,  $C_{1-6}$  alkyl,  $C_{2-8}$  alkenyl,  $C_{2-8}$  alkynyl,  $(CH_2)_r C_{3-6}$  cycloalkyl,  $(CH_2)_r OH$ ,  $(CH_2)_r OC_{1-6}$  alkyl,  $(CH_2)_r C(O)R^{19}$ ,  $(CH_2)_r C(O)N(R^{18a})R^{18b}$ ,  
 5  $(CH_2)_r C(O)OR^{19}$ ,  $(CH_2)_r S(O)_2R^{19}$ ,  
 $(CH_2)_r S(O)_2N(R^{18a})R^{18b}$ , and  $(CH_2)_r$ phenyl substituted with 0-3  $R^{17}$ ;
- $R^{9b}$ , at each occurrence are independently selected from H,  
 10  $C_{1-6}$  alkyl,  $C_{2-8}$  alkenyl,  $C_{2-8}$  alkynyl,  $(CH_2)_r C_{3-6}$  cycloalkyl,  $(CF_2)_r CF_3$ ,  $(CH_2)_r N(R^{18a})R^{18b}$ ,  $(CH_2)_r OH$ ,  
 $(CH_2)_r OR^{19}$ ,  $(CH_2)_r SH$ ,  $(CH_2)_r SR^{19}$ ,  $(CH_2)_r C(O)OH$ ,  
 $(CH_2)_r C(O)R^{19}$ ,  $(CH_2)_r C(O)N(R^{18a})R^{18b}$ ,  
 $(CH_2)_r N(R^{18c})C(O)R^{19}$ ,  $(CH_2)_r C(O)OR^{19}$ ,  $(CH_2)_r OC(O)R^{19}$ ,  
 15  $(CH_2)_r S(O)R^{19}$ ,  $(CH_2)_r S(O)_2R^{19}$ ,  $(CH_2)_r S(O)_2N(R^{18a})R^{18b}$ ,  
 $(CH_2)_r N(R^{18c})S(O)_2R^{19}$ , and  $(CH_2)_r$ phenyl substituted with 0-3  $R^{17}$ ;
- $R^{10}$ , at each occurrence, is independently selected from H,  
 20  $C_{1-6}$  alkyl,  $C_{2-8}$  alkenyl,  $C_{2-8}$  alkynyl,  $(CH_2)_r C_{3-6}$  cycloalkyl,  $(CF_2)_r CF_3$ , CN,  $(CH_2)_r NR^{10a}R^{10a}$ ,  $(CH_2)_r OH$ ,  
 $(CH_2)_r OR^{10b}$ ,  $(CH_2)_r SH$ ,  $(CH_2)_r SR^{10b}$ ,  $(CH_2)_r C(O)OH$ ,  
 $(CH_2)_r C(O)R^{10b}$ ,  $(CH_2)_r C(O)NR^{10a}R^{10a}$ ,  
 $(CH_2)_r NR^{10d}C(O)R^{10a}$ ,  $(CH_2)_r C(O)OR^{10b}$ ,  $(CH_2)_r OC(O)R^{10b}$ ,  
 25  $(CH_2)_r S(O)_p R^{10b}$ ,  $(CH_2)_r S(O)_2 NR^{10a}R^{10a}$ ,  
 $(CH_2)_r NR^{10d}S(O)_2 R^{10b}$ , and  $(CH_2)_t$ phenyl substituted with 0-3  $R^{10c}$ ;



R<sup>10a</sup>, at each occurrence, is independently selected from H, C<sub>1-6</sub> alkyl, C<sub>3-6</sub> cycloalkyl, and phenyl substituted with 0-3 R<sup>10c</sup>;

5 R<sup>10b</sup>, at each occurrence, is independently selected from C<sub>1-6</sub> alkyl, C<sub>3-6</sub> cycloalkyl, and phenyl substituted with 0-3 R<sup>10c</sup>;

10 R<sup>10c</sup>, at each occurrence, is independently selected from C<sub>1-6</sub> alkyl, C<sub>3-6</sub> cycloalkyl, Cl, F, Br, I, CN, NO<sub>2</sub>, (CF<sub>2</sub>)<sub>r</sub>CF<sub>3</sub>, (CH<sub>2</sub>)<sub>r</sub>OC<sub>1-5</sub> alkyl, (CH<sub>2</sub>)<sub>r</sub>OH, (CH<sub>2</sub>)<sub>r</sub>SC<sub>1-5</sub> alkyl, and (CH<sub>2</sub>)<sub>r</sub>NR<sup>10d</sup>R<sup>10d</sup>;

15 R<sup>10d</sup>, at each occurrence, is independently selected from H, C<sub>1-6</sub> alkyl, and C<sub>3-10</sub> cycloalkyl;

R<sup>11a</sup> and R<sup>12a</sup>, at each occurrence are independently selected from H, C<sub>1-6</sub> alkyl, C<sub>2-8</sub> alkenyl, C<sub>2-8</sub> alkynyl, (CH<sub>2</sub>)<sub>r</sub>C<sub>3-6</sub> cycloalkyl, (CF<sub>2</sub>)<sub>r</sub>CF<sub>3</sub>,  
 20 (CH<sub>2</sub>)<sub>r</sub>N(R<sup>18a</sup>)R<sup>18b</sup>, (CH<sub>2</sub>)<sub>r</sub>OH, (CH<sub>2</sub>)<sub>r</sub>OR<sup>19</sup>, (CH<sub>2</sub>)<sub>r</sub>SH, (CH<sub>2</sub>)<sub>r</sub>SR<sup>19</sup>, (CH<sub>2</sub>)<sub>r</sub>C(O)OH, (CH<sub>2</sub>)<sub>r</sub>C(O)R<sup>19</sup>, (CH<sub>2</sub>)<sub>r</sub>C(O)N(R<sup>18a</sup>)R<sup>18b</sup>, (CH<sub>2</sub>)<sub>r</sub>N(R<sup>18c</sup>)C(O)R<sup>19</sup>, (CH<sub>2</sub>)<sub>r</sub>C(O)OR<sup>19</sup>, (CH<sub>2</sub>)<sub>r</sub>OC(O)R<sup>19</sup>, (CH<sub>2</sub>)<sub>r</sub>S(O)R<sup>19</sup>, (CH<sub>2</sub>)<sub>r</sub>S(O)<sub>2</sub>R<sup>19</sup>, (CH<sub>2</sub>)<sub>r</sub>S(O)<sub>2</sub>N(R<sup>18a</sup>)R<sup>18b</sup>,  
 25 (CH<sub>2</sub>)<sub>r</sub>N(R<sup>18c</sup>)S(O)<sub>2</sub>R<sup>19</sup>, and (CH<sub>2</sub>)<sub>r</sub>phenyl substituted with 0-3 R<sup>18</sup>;

R<sup>11b</sup>, R<sup>12b</sup>, R<sup>14a</sup> and R<sup>14b</sup> at each occurrence are independently selected from H, C<sub>1-6</sub> alkyl, C<sub>2-8</sub>

- alkenyl, C<sub>2-8</sub> alkynyl, (CH<sub>2</sub>)<sub>r</sub>C<sub>3-6</sub> cycloalkyl,  
 (CF<sub>2</sub>)<sub>r</sub>CF<sub>3</sub>, (CH<sub>2</sub>)<sub>q</sub>N(R<sup>18a</sup>)R<sup>18b</sup>, (CH<sub>2</sub>)<sub>q</sub>OH, (CH<sub>2</sub>)<sub>q</sub>OR<sup>19</sup>,  
 (CH<sub>2</sub>)<sub>q</sub>SH, (CH<sub>2</sub>)<sub>q</sub>SR<sup>19</sup>, (CH<sub>2</sub>)<sub>r</sub>C(O)OH, (CH<sub>2</sub>)<sub>r</sub>C(O)R<sup>19</sup>,  
 (CH<sub>2</sub>)<sub>r</sub>C(O)N(R<sup>18a</sup>)R<sup>18b</sup>, (CH<sub>2</sub>)<sub>q</sub>N(R<sup>18c</sup>)C(O)R<sup>19</sup>,  
 5 (CH<sub>2</sub>)<sub>r</sub>C(O)OR<sup>19</sup>, (CH<sub>2</sub>)<sub>q</sub>OC(O)R<sup>19</sup>, (CH<sub>2</sub>)<sub>q</sub>S(O)R<sup>19</sup>,  
 (CH<sub>2</sub>)<sub>q</sub>S(O)<sub>2</sub>R<sup>19</sup>, (CH<sub>2</sub>)<sub>q</sub>S(O)<sub>2</sub>N(R<sup>18a</sup>)R<sup>18b</sup>,  
 (CH<sub>2</sub>)<sub>q</sub>N(R<sup>18c</sup>)S(O)<sub>2</sub>R<sup>19</sup>, and (CH<sub>2</sub>)<sub>r</sub>phenyl substituted  
 with 0-3 R<sup>18</sup>;
- 10 alternatively, R<sup>11a</sup> and R<sup>11b</sup> taken together are selected  
 form =O, or =NOH, or alternatively, R<sup>12a</sup> and R<sup>12b</sup>  
 taken together are selected form =O, or =NOH;
- R<sup>15</sup>, at each occurrence, is independently selected from  
 15 C<sub>1-8</sub> alkyl, (CH<sub>2</sub>)<sub>r</sub>C<sub>3-6</sub> cycloalkyl, Cl, Br, I, F, NO<sub>2</sub>,  
 CN, (CHR')<sub>r</sub>NR<sup>15a</sup>R<sup>15a</sup>, (CHR')<sub>r</sub>OH, (CHR')<sub>r</sub>O(CHR')<sub>r</sub>R<sup>15d</sup>,  
 (CHR')<sub>r</sub>SH, (CHR')<sub>r</sub>C(O)H, (CHR')<sub>r</sub>S(CHR')<sub>r</sub>R<sup>15d</sup>,  
 (CHR')<sub>r</sub>C(O)OH, (CHR')<sub>r</sub>C(O)(CHR')<sub>r</sub>R<sup>15b</sup>,  
 (CHR')<sub>r</sub>C(O)NR<sup>15a</sup>R<sup>15a</sup>, (CHR')<sub>r</sub>NR<sup>15f</sup>C(O)(CHR')<sub>r</sub>R<sup>15b</sup>,  
 20 (CHR')<sub>r</sub>NR<sup>15f</sup>C(O)NR<sup>15f</sup>R<sup>15f</sup>, (CHR')<sub>r</sub>C(O)O(CHR')<sub>r</sub>R<sup>15d</sup>,  
 (CHR')<sub>r</sub>OC(O)(CHR')<sub>r</sub>R<sup>15b</sup>, (CHR')<sub>r</sub>C(=NR<sup>15f</sup>)NR<sup>15a</sup>R<sup>15a</sup>,  
 (CHR')<sub>r</sub>NHC(=NR<sup>15f</sup>)NR<sup>15f</sup>R<sup>15f</sup>, (CHR')<sub>r</sub>S(O)<sub>p</sub>(CHR')<sub>r</sub>R<sup>15b</sup>,  
 (CHR')<sub>r</sub>S(O)<sub>2</sub>NR<sup>15a</sup>R<sup>15a</sup>, (CHR')<sub>r</sub>NR<sup>15f</sup>S(O)<sub>2</sub>(CHR')<sub>r</sub>R<sup>15b</sup>,  
 C<sub>1-6</sub> haloalkyl, C<sub>2-8</sub> alkenyl substituted with 0-3 R',  
 25 C<sub>2-8</sub> alkynyl substituted with 0-3 R', (CHR')<sub>r</sub>phenyl  
 substituted with 0-3 R<sup>15e</sup>, and a (CH<sub>2</sub>)<sub>r-5-10</sub> membered  
 heterocyclic system containing 1-4 heteroatoms  
 selected from N, O, and S, substituted with 0-2 R<sup>15e</sup>;

R', at each occurrence, is independently selected from H, C<sub>1-6</sub> alkyl, C<sub>2-8</sub> alkenyl, C<sub>2-8</sub> alkynyl, (CH<sub>2</sub>)<sub>r</sub>C<sub>3-6</sub> cycloalkyl, and (CH<sub>2</sub>)<sub>r</sub>phenyl substituted with R<sup>15e</sup>;

5

R<sup>15a</sup>, at each occurrence, are selected from H, C<sub>1-6</sub> alkyl, C<sub>2-8</sub> alkenyl, C<sub>2-8</sub> alkynyl, a (CH<sub>2</sub>)<sub>r</sub>-C<sub>3-6</sub> carbocyclic residue substituted with 0-5 R<sup>15e</sup>, and a (CH<sub>2</sub>)<sub>r</sub>-5-10 membered heterocyclic system containing 1-4 heteroatoms selected from N, O, and S, substituted with 0-2 R<sup>15e</sup>;

10

R<sup>15b</sup>, at each occurrence, is independently selected from C<sub>1-6</sub> alkyl, C<sub>2-8</sub> alkenyl, C<sub>2-8</sub> alkynyl, a (CH<sub>2</sub>)<sub>r</sub>-C<sub>3-6</sub> carbocyclic residue substituted with 0-3 R<sup>15e</sup>, and (CH<sub>2</sub>)<sub>r</sub>-5-6 membered heterocyclic system containing 1-4 heteroatoms selected from N, O, and S, substituted with 0-2 R<sup>15e</sup>;

15

R<sup>15d</sup>, at each occurrence, is independently selected from C<sub>2-8</sub> alkenyl, C<sub>2-8</sub> alkynyl, C<sub>1-6</sub> alkyl substituted with 0-3 R<sup>15e</sup>, a (CH<sub>2</sub>)<sub>r</sub>-C<sub>3-6</sub> carbocyclic residue substituted with 0-3 R<sup>15e</sup>, and a (CH<sub>2</sub>)<sub>r</sub>-5-6 membered heterocyclic system containing 1-4 heteroatoms selected from N, O, and S, substituted with 0-3 R<sup>15e</sup>;

20

25

R<sup>15e</sup>, at each occurrence, is independently selected from C<sub>1-6</sub> alkyl, C<sub>2-8</sub> alkenyl, C<sub>2-8</sub> alkynyl, (CH<sub>2</sub>)<sub>r</sub>C<sub>3-6</sub> cycloalkyl, Cl, F, Br, I, CN, NO<sub>2</sub>, (CF<sub>2</sub>)<sub>r</sub>CF<sub>3</sub>,

$(\text{CH}_2)_r\text{OC}_{1-5}$  alkyl, OH, SH,  $(\text{CH}_2)_r\text{SC}_{1-5}$  alkyl,  
 $(\text{CH}_2)_r\text{NR}^{15f}\text{R}^{15f}$ , and  $(\text{CH}_2)_r\text{phenyl}$ ;

$\text{R}^{15f}$ , at each occurrence, is independently selected from  
 5 H,  $\text{C}_{1-6}$  alkyl,  $\text{C}_{3-6}$  cycloalkyl, and phenyl;

$\text{R}^{16}$ , at each occurrence, is independently selected from  
 $\text{C}_{1-8}$  alkyl,  $\text{C}_{2-8}$  alkenyl,  $\text{C}_{2-8}$  alkynyl,  $(\text{CH}_2)_r\text{C}_{3-6}$   
 cycloalkyl, Cl, Br, I, F,  $\text{NO}_2$ , CN,  $(\text{CHR}')_r\text{NR}^{16a}\text{R}^{16a}$ ,  
 10  $(\text{CHR}')_r\text{OH}$ ,  $(\text{CHR}')_r\text{O}(\text{CHR}')_r\text{R}^{16d}$ ,  $(\text{CHR}')_r\text{SH}$ ,  
 $(\text{CHR}')_r\text{C}(\text{O})\text{H}$ ,  $(\text{CHR}')_r\text{S}(\text{CHR}')_r\text{R}^{16d}$ ,  $(\text{CHR}')_r\text{C}(\text{O})\text{OH}$ ,  
 $(\text{CHR}')_r\text{C}(\text{O})(\text{CHR}')_r\text{R}^{16b}$ ,  $(\text{CHR}')_r\text{C}(\text{O})\text{NR}^{16a}\text{R}^{16a}$ ,  
 $(\text{CHR}')_r\text{NR}^{16f}\text{C}(\text{O})(\text{CHR}')_r\text{R}^{16b}$ ,  $(\text{CHR}')_r\text{C}(\text{O})\text{O}(\text{CHR}')_r\text{R}^{16d}$ ,  
 $(\text{CHR}')_r\text{OC}(\text{O})(\text{CHR}')_r\text{R}^{16b}$ ,  $(\text{CHR}')_r\text{C}(=\text{NR}^{16f})\text{NR}^{16a}\text{R}^{16a}$ ,  
 15  $(\text{CHR}')_r\text{NHC}(=\text{NR}^{16f})\text{NR}^{16f}\text{R}^{16f}$ ,  $(\text{CHR}')_r\text{S}(\text{O})_p(\text{CHR}')_r\text{R}^{16b}$ ,  
 $(\text{CHR}')_r\text{S}(\text{O})_2\text{NR}^{16a}\text{R}^{16a}$ ,  $(\text{CHR}')_r\text{NR}^{16f}\text{S}(\text{O})_2(\text{CHR}')_r\text{R}^{16b}$ ,  
 $\text{C}_{1-6}$  haloalkyl,  $\text{C}_{2-8}$  alkenyl substituted with 0-3  $\text{R}'$ ,  
 $\text{C}_{2-8}$  alkynyl substituted with 0-3  $\text{R}'$ , and  
 $(\text{CHR}')_r\text{phenyl}$  substituted with 0-3  $\text{R}^{16e}$ ;

20

$\text{R}^{16a}$ , at each occurrence, is independently selected from  
H,  $\text{C}_{1-6}$  alkyl,  $\text{C}_{2-8}$  alkenyl,  $\text{C}_{2-8}$  alkynyl, a  $(\text{CH}_2)_r$ -  
 $\text{C}_{3-6}$  carbocyclic residue substituted with 0-5  $\text{R}^{16e}$ ,  
and a  $(\text{CH}_2)_r$ -5-10 membered heterocyclic system  
 25 containing 1-4 heteroatoms selected from N, O, and  
S, substituted with 0-2  $\text{R}^{16e}$ ;

R<sup>16b</sup>, at each occurrence, is independently selected from  
 C<sub>1-6</sub> alkyl, C<sub>2-8</sub> alkenyl, C<sub>2-8</sub> alkynyl, a (CH<sub>2</sub>)<sub>r</sub>C<sub>3-6</sub>  
 carbocyclic residue substituted with 0-3 R<sup>16e</sup>, and a  
 (CH<sub>2</sub>)<sub>r</sub>-5-6 membered heterocyclic system containing  
 5 1-4 heteroatoms selected from N, O, and S,  
 substituted with 0-2 R<sup>16e</sup>;

R<sup>16d</sup>, at each occurrence, is independently selected from  
 C<sub>2-8</sub> alkenyl, C<sub>2-8</sub> alkynyl, C<sub>1-6</sub> alkyl substituted  
 10 with 0-3 R<sup>16e</sup>, a (CH<sub>2</sub>)<sub>r</sub>-C<sub>3-6</sub> carbocyclic residue  
 substituted with 0-3 R<sup>16e</sup>, and a (CH<sub>2</sub>)<sub>r</sub>-5-6 membered  
 heterocyclic system containing 1-4 heteroatoms  
 selected from N, O, and S, substituted with 0-3 R<sup>16e</sup>;

15 R<sup>16e</sup>, at each occurrence, is independently selected from  
 C<sub>1-6</sub> alkyl, C<sub>2-8</sub> alkenyl, C<sub>2-8</sub> alkynyl, (CH<sub>2</sub>)<sub>r</sub>C<sub>3-6</sub>  
 cycloalkyl, Cl, F, Br, I, CN, NO<sub>2</sub>, (CF<sub>2</sub>)<sub>r</sub>CF<sub>3</sub>,  
 (CH<sub>2</sub>)<sub>r</sub>OC<sub>1-5</sub> alkyl, OH, SH, (CH<sub>2</sub>)<sub>r</sub>SC<sub>1-5</sub> alkyl,  
 (CH<sub>2</sub>)<sub>r</sub>NR<sup>16f</sup>R<sup>16f</sup>, and (CH<sub>2</sub>)<sub>r</sub>phenyl;

20

R<sup>16f</sup>, at each occurrence, is independently selected from  
 H, C<sub>1-5</sub> alkyl, and C<sub>3-6</sub> cycloalkyl, and phenyl;

25 R<sup>17</sup> at each occurrence is independently selected from =O,  
 C<sub>1-6</sub> alkyl, (CH<sub>2</sub>)<sub>r</sub>C<sub>3-6</sub> cycloalkyl, Cl, F, Br, I, CN,  
 NO<sub>2</sub>, (CH<sub>2</sub>)<sub>r</sub>OR<sup>19</sup>, (CH<sub>2</sub>)<sub>r</sub>OH, (CH<sub>2</sub>)<sub>r</sub>SR<sup>19</sup>, (CH<sub>2</sub>)<sub>r</sub>S(O)R<sup>19</sup>,  
 (CH<sub>2</sub>)<sub>r</sub>S(O)<sub>2</sub>R<sup>19</sup>, (CH<sub>2</sub>)<sub>r</sub>S(O)<sub>2</sub>N(R<sup>18a</sup>)R<sup>18b</sup>,  
 (CH<sub>2</sub>)<sub>r</sub>N(R<sup>18c</sup>)C(O)R<sup>19</sup> (CH<sub>2</sub>)<sub>r</sub>N(R<sup>18c</sup>)S(O)<sub>2</sub>R<sup>19</sup>,  
 (CH<sub>2</sub>)<sub>r</sub>C(O)OH, (CH<sub>2</sub>)<sub>r</sub>C(O)OR<sup>19</sup>, (CH<sub>2</sub>)<sub>r</sub>C(O)N(R<sup>18a</sup>)R<sup>18b</sup>,

- $(\text{CH}_2)_r\text{N}(\text{R}^{18c})\text{C}(\text{O})\text{N}(\text{R}^{18a})\text{R}^{18b}$ ,  $(\text{CH}_2)_r\text{N}(\text{R}^{18c})\text{C}(\text{O})\text{OR}^{19}$ ,  
 $(\text{CH}_2)_r\text{OC}(\text{O})\text{N}(\text{R}^{18a})\text{R}^{18b}$ ,  $(\text{CH}_2)_r\text{N}(\text{R}^{18a})\text{R}^{18b}$ ,  $\text{C}_{1-6}$   
haloalkyl,  $\text{C}_{2-8}$  alkenyl substituted with 0-3  $\text{R}^{17a}$ ,  $\text{C}_{2-8}$   
alkynyl substituted with 0-3  $\text{R}^{17a}$ ,  $(\text{CH}(\text{R}^{17a}))_r$ phenyl  
5 substituted with 1-3  $\text{R}^{18}$ , and  $(\text{CH}(\text{R}^{17a}))_{r-5-10}$   
membered heterocyclic system containing 1-4  
heteroatoms selected from N, O, and S, substituted  
with 0-2  $\text{R}^{18}$ ;
- 10  $\text{R}^{17a}$  at each occurrence is independently selected from H,  
 $\text{C}_{1-6}$  alkyl,  $\text{C}_{2-8}$  alkenyl,  $\text{C}_{2-8}$  alkynyl,  $(\text{CH}_2)_r\text{C}_{3-6}$   
cycloalkyl, and  $(\text{CH}_2)_r$ phenyl substituted with 0-3  
 $\text{R}^{18}$ ;
- 15  $\text{R}^{18}$  at each occurrence is independently selected from  $\text{C}_{1-6}$   
alkyl,  $\text{C}_{3-6}$  cycloalkyl, Cl, F, Br, I, CN,  $\text{NO}_2$ ,  
 $(\text{CF}_2)_r\text{CF}_3$ ,  $(\text{CH}_2)_r\text{OC}_{1-5}$  alkyl,  $(\text{CH}_2)_r\text{OH}$ ,  $(\text{CH}_2)_r\text{SC}_{1-5}$   
alkyl,  $(\text{CH}_2)_r\text{S}(\text{O})\text{C}_{1-5}$  alkyl,  $(\text{CH}_2)_r\text{S}(\text{O})_2\text{C}_{1-5}$  alkyl,  
 $(\text{CH}_2)_r\text{S}(\text{O})_2\text{N}(\text{R}^{18a})\text{R}^{18b}$ ,  $(\text{CH}_2)_r\text{N}(\text{R}^{18c})\text{C}(\text{O})\text{C}_{1-5}$  alkyl  
20  $(\text{CH}_2)_r\text{N}(\text{R}^{18c})\text{S}(\text{O})_2\text{C}_{1-5}$  alkyl,  $(\text{CH}_2)_r\text{C}(\text{O})\text{N}(\text{R}^{18a})\text{R}^{18b}$ ,  
 $(\text{CH}_2)_r\text{C}(\text{O})\text{OC}_{1-5}$  alkyl,  $(\text{CH}_2)_r\text{C}(\text{O})\text{C}_{1-5}$  alkyl, and  
 $(\text{CH}_2)_r\text{N}(\text{R}^{18a})\text{R}^{18b}$ ;
- 25  $\text{R}^{18a}$ ,  $\text{R}^{18b}$ , and  $\text{R}^{18c}$  at each occurrence are independently  
selected from H,  $\text{C}_{1-6}$  alkyl, and  $\text{C}_{3-6}$  cycloalkyl;
- $\text{R}^{19}$  at each occurrence is independently selected from  $\text{C}_{1-6}$   
alkyl,  $\text{C}_{3-6}$  cycloalkyl, and phenyl substituted with  
0-3  $\text{R}^{18}$ ;

alternatively,  $R^{18a}$  and  $R^{18b}$  along with the nitrogen to  
 which both are attached form a pyrrolidine,  
 piperidine, piperazine or morpholine ring;

5

$R^{25}$  at each occurrence is independently selected from H,  
 $C_{1-6}$  alkyl,  $C_{2-8}$  alkenyl,  $C_{2-8}$  alkynyl,  $(CH_2)_r C_{3-6}$   
 cycloalkyl,  $(CH_2)_r C(O)R^{19}$ ,  $(CH_2)_r C(O)N(R^{18a})R^{18b}$ ,  
 $(CH_2)_r C(O)OR^{19}$ ,  $(CH_2)_r S(O)_2R^{19}$ ,  
 10  $(CH_2)_r S(O)_2N(R^{18a})R^{18b}$ , and  $(CH_2)_r$ phenyl substituted  
 with 0-3  $R^{17}$ ;

$i$  is selected from 0, 1, and 2;

15  $m$  is selected from 0, 1, and 2;

$s$  is selected from 0 and 1;

with the proviso:  $m + s$  is selected from 0, 1, and 2;

20

$n$  is selected from 1 and 2;

$v$  is selected from 0, 1, 2, and 3;

25 with the proviso: that the total number of atoms between  
 the nitrogen of which  $R'$  is attached and the fused  
 ring B is less than or equal to 4;

$r$  is selected from 0, 1, 2, 3, 4, and 5;

30

$t$  is selected from 0, 1, 2, 3, 4, and 5;

q is selected from 1, 2, 3, 4, and 5;

p is selected from 1, 2, and 3;

5 u is selected from 0, 1 and, 2.

2. The compound of claim 1, wherein

10 R<sup>11a</sup> and R<sup>12a</sup>, at each occurrence are independently selected from H, C<sub>1-6</sub> alkyl, C<sub>2-8</sub> alkenyl, C<sub>2-8</sub> alkynyl, (CH<sub>2</sub>)<sub>r</sub>C<sub>3-6</sub> cycloalkyl, (CF<sub>2</sub>)<sub>r</sub>CF<sub>3</sub>, (CH<sub>2</sub>)<sub>r</sub>N(R<sup>18a</sup>)R<sup>18b</sup>, (CH<sub>2</sub>)<sub>r</sub>OH, (CH<sub>2</sub>)<sub>r</sub>OR<sup>19</sup>, (CH<sub>2</sub>)<sub>r</sub>SH, (CH<sub>2</sub>)<sub>r</sub>SR<sup>19</sup>, (CH<sub>2</sub>)<sub>r</sub>C(O)OH, (CH<sub>2</sub>)<sub>r</sub>C(O)R<sup>19</sup>, (CH<sub>2</sub>)<sub>r</sub>C(O)N(R<sup>18a</sup>)R<sup>18b</sup>, (CH<sub>2</sub>)<sub>r</sub>N(R<sup>18c</sup>)C(O)R<sup>19</sup>,  
15 (CH<sub>2</sub>)<sub>r</sub>C(O)OR<sup>19</sup>, (CH<sub>2</sub>)<sub>r</sub>OC(O)R<sup>19</sup>, (CH<sub>2</sub>)<sub>r</sub>S(O)R<sup>19</sup>, (CH<sub>2</sub>)<sub>r</sub>S(O)<sub>2</sub>R<sup>19</sup>, (CH<sub>2</sub>)<sub>r</sub>S(O)<sub>2</sub>N(R<sup>18a</sup>)R<sup>18b</sup>, (CH<sub>2</sub>)<sub>r</sub>N(R<sup>18c</sup>)S(O)<sub>2</sub>R<sup>19</sup>, and (CH<sub>2</sub>)<sub>r</sub>phenyl substituted with 0-3 R<sup>18</sup>; and

20 R<sup>11b</sup>, R<sup>12b</sup>, R<sup>14a</sup> and R<sup>14b</sup> at each occurrence are independently selected from H, C<sub>1-6</sub> alkyl, C<sub>2-8</sub> alkenyl, C<sub>2-8</sub> alkynyl, (CH<sub>2</sub>)<sub>r</sub>C<sub>3-6</sub> cycloalkyl, (CF<sub>2</sub>)<sub>r</sub>CF<sub>3</sub>, (CH<sub>2</sub>)<sub>q</sub>N(R<sup>18a</sup>)R<sup>18b</sup>, (CH<sub>2</sub>)<sub>q</sub>OH, (CH<sub>2</sub>)<sub>q</sub>OR<sup>19</sup>, (CH<sub>2</sub>)<sub>q</sub>SH, (CH<sub>2</sub>)<sub>q</sub>SR<sup>19</sup>, (CH<sub>2</sub>)<sub>r</sub>C(O)OH, (CH<sub>2</sub>)<sub>r</sub>C(O)R<sup>19</sup>,  
25 (CH<sub>2</sub>)<sub>r</sub>C(O)N(R<sup>18a</sup>)R<sup>18b</sup>, (CH<sub>2</sub>)<sub>q</sub>N(R<sup>18c</sup>)C(O)R<sup>19</sup>, (CH<sub>2</sub>)<sub>r</sub>C(O)OR<sup>19</sup>, (CH<sub>2</sub>)<sub>q</sub>OC(O)R<sup>19</sup>, (CH<sub>2</sub>)<sub>q</sub>S(O)R<sup>19</sup>, (CH<sub>2</sub>)<sub>q</sub>S(O)<sub>2</sub>R<sup>19</sup>, (CH<sub>2</sub>)<sub>q</sub>S(O)<sub>2</sub>N(R<sup>18a</sup>)R<sup>18b</sup>, (CH<sub>2</sub>)<sub>q</sub>N(R<sup>18c</sup>)S(O)<sub>2</sub>R<sup>19</sup>, and (CH<sub>2</sub>)<sub>r</sub>phenyl substituted with 0-3 R<sup>18</sup>.

30



3. The compound of claim 2, wherein

R<sup>1</sup> and R<sup>2</sup> are independently selected from H, and C<sub>1-8</sub> alkyl;

5

R<sup>4</sup> is absent, taken with the nitrogen to which it is attached to form an N-oxide, or selected from C<sub>1-8</sub> alkyl, (CH<sub>2</sub>)<sub>r</sub>C<sub>3-6</sub> cycloalkyl, and a (CH<sub>2</sub>)<sub>r</sub>-C<sub>3-6</sub> carbocyclic residue substituted with 0-3 R<sup>4C</sup>; and

10

R<sup>4C</sup>, at each occurrence, is independently selected from C<sub>1-6</sub> alkyl, C<sub>2-8</sub> alkenyl, C<sub>2-8</sub> alkynyl, C<sub>3-6</sub> cycloalkyl, Cl, F, Br, I, CN, NO<sub>2</sub>, (CF<sub>2</sub>)<sub>r</sub>CF<sub>3</sub>, (CH<sub>2</sub>)<sub>r</sub>OC<sub>1-5</sub> alkyl, (CH<sub>2</sub>)<sub>r</sub>OH, (CH<sub>2</sub>)<sub>r</sub>SC<sub>1-5</sub> alkyl, (CH<sub>2</sub>)<sub>r</sub>NR<sup>4a</sup>R<sup>4a</sup>, and (CH<sub>2</sub>)<sub>r</sub>phenyl.

15

4. The compound of claim 3, wherein

Z is selected from O and S;

20

R<sup>6</sup>, at each occurrence, is independently selected from C<sub>1-4</sub> alkyl, (CH<sub>2</sub>)<sub>r</sub>C<sub>3-6</sub> cycloalkyl, (CH<sub>2</sub>)<sub>q</sub>NR<sup>6a</sup>R<sup>6a</sup>, (CH<sub>2</sub>)<sub>q</sub>OH, (CH<sub>2</sub>)<sub>q</sub>OR<sup>6b</sup>, (CH<sub>2</sub>)<sub>r</sub>C(O)OH, (CH<sub>2</sub>)<sub>r</sub>C(O)R<sup>6b</sup>, (CH<sub>2</sub>)<sub>r</sub>C(O)NR<sup>6a</sup>R<sup>6a</sup>, (CH<sub>2</sub>)<sub>q</sub>NR<sup>6d</sup>C(O)R<sup>6a</sup>, (CH<sub>2</sub>)<sub>r</sub>S(O)<sub>2</sub>NR<sup>6a</sup>R<sup>6a</sup>, (CH<sub>2</sub>)<sub>r</sub>NR<sup>6d</sup>S(O)<sub>2</sub>R<sup>6b</sup>, and (CH<sub>2</sub>)<sub>t</sub>phenyl substituted with 0-3 R<sup>6C</sup>;

25

R<sup>6a</sup> and R<sup>6a</sup>, at each occurrence, are selected from H, methyl, ethyl, propyl, i-propyl, butyl, cyclopropyl, cyclopentyl, cyclohexyl, and phenyl;

30

$R^{6b}$ , at each occurrence, is independently selected from methyl, ethyl, propyl, i-propyl, butyl, cyclopropyl, cyclopentyl, cyclohexyl, and phenyl;

5

$R^{6c}$ , at each occurrence, is independently selected from  $C_{1-6}$  alkyl,  $C_{3-6}$  cycloalkyl, Cl, F, Br, I, CN,  $NO_2$ ,  $(CF_2)_rCF_3$ ,  $(CH_2)_rOC_{1-5}$  alkyl,  $(CH_2)_rOH$ ,  $(CH_2)_rSC_{1-5}$  alkyl, and  $(CH_2)_rNR^{6d}R^{6d}$ ;

10

$R^{6d}$ , at each occurrence, is independently selected from H, methyl, ethyl, propyl, i-propyl, butyl, cyclopropyl, cyclopentyl, and cyclohexyl;

15  $R^7$ , is selected from H,  $C_{1-6}$  alkyl,  $C_{2-8}$  alkenyl,  $C_{2-8}$  alkynyl,  $(CH_2)_qOH$ ,  $(CH_2)_qOR^{7d}$ ,  $(CH_2)_qNR^{7a}R^{7a}$ ,  $(CH_2)_rC(O)R^{7b}$ ,  $(CH_2)_rC(O)NR^{7a}R^{7a}$ ,  $(CH_2)_qNR^{7a}C(O)R^{7a}$ ,  $(CH_2)_qNR^{7a}C(O)H$ ,  $(CH_2)_rC(O)OR^{7b}$ ,  $(CH_2)_qOC(O)R^{7b}$ ,  $C_{1-6}$  haloalkyl, a  $(CH_2)_r-C_{3-6}$  carbocyclic residue  
 20 substituted with 0-3  $R^{7c}$ , and a  $(CH_2)_r-5-10$  membered heterocyclic system containing 1-4 heteroatoms selected from N, O, and S, substituted with 0-2  $R^{7c}$ , wherein the heterocyclic system is selected from pyridinyl, thiophenyl, furanyl, indazolyl,  
 25 benzothiazolyl, benzimidazolyl, benzothiophenyl, benzofuranyl, benzoxazolyl, benzisoxazolyl, quinolinyl, isoquinolinyl, imidazolyl, indolyl, indolinyl, indazolyl, isoindolyl, isothiadiazolyl, isoxazolyl, piperidinyl, pyrrazolyl, 1,2,4-  
 30 triazolyl, 1,2,3-triazolyl, tetrazolyl,

thiadiazolyl, thiazolyl, oxazolyl, pyrazinyl, and pyrimidinyl;

5  $R^{7a}$ , at each occurrence, is independently selected from H,  $C_{1-6}$  alkyl, and a  $(CH_2)_r-C_{3-6}$  carbocyclic residue substituted with 0-5  $R^{7e}$ ;

10  $R^{7b}$ , at each occurrence, is independently selected from  $C_{1-6}$  alkyl, a  $(CH_2)_r-C_{3-6}$  carbocyclic residue substituted with 0-2  $R^{7e}$ ;

$R^{7c}$ , at each occurrence, is independently selected from  $C_{1-6}$  alkyl,  $C_{2-8}$  alkenyl,  $C_{2-8}$  alkynyl,  $(CH_2)_rC_{3-6}$  cycloalkyl, Cl, Br, I, F,  $(CF_2)_rCF_3$ ,  $NO_2$ , CN, 15  $(CH_2)_rNR^{7f}R^{7f}$ ,  $(CH_2)_rOH$ ,  $(CH_2)_rOC_{1-4}$  alkyl,  $(CH_2)_rSC_{1-4}$  alkyl,  $(CH_2)_rC(O)OH$ ,  $(CH_2)_rC(O)R^{7b}$ ,  $(CH_2)_rC(O)NR^{7f}R^{7f}$ ,  $(CH_2)_rNR^{7f}C(O)R^{7a}$ ,  $(CH_2)_rC(O)OC_{1-4}$  alkyl,  $(CH_2)_rOC(O)R^{7b}$ ,  $(CH_2)_rC(=NR^{7f})NR^{7f}R^{7f}$ ,  $(CH_2)_rS(O)_pR^{7b}$ ,  $(CH_2)_rNHC(=NR^{7f})NR^{7f}R^{7f}$ ,  $(CH_2)_rS(O)_2NR^{7f}R^{7f}$ , 20  $(CH_2)_rNR^{7f}S(O)_2R^{7b}$ , and  $(CH_2)_r$ phenyl substituted with 0-3  $R^{7e}$ ;

25  $R^{7d}$ , at each occurrence, is independently selected from  $C_{1-6}$  alkyl substituted with 0-3  $R^{7e}$ , and a  $C_{3-6}$  carbocyclic residue substituted with 0-3  $R^{7c}$ ;

$R^{7e}$ , at each occurrence, is independently selected from  $C_{1-6}$  alkyl,  $C_{2-8}$  alkenyl,  $C_{2-8}$  alkynyl,  $C_{3-6}$  cycloalkyl, Cl, F, Br, I, CN,  $NO_2$ ,  $(CF_2)_rCF_3$ ,

$(\text{CH}_2)_r\text{OC}_{1-5}$  alkyl, OH, SH,  $(\text{CH}_2)_r\text{SC}_{1-5}$  alkyl,  
 $(\text{CH}_2)_r\text{NR}^{7f}\text{R}^{7f}$ , and  $(\text{CH}_2)_r\text{phenyl}$ ;

5  $\text{R}^{7f}$ , at each occurrence, is independently selected from  
H, methyl, ethyl, propyl, i-propyl, butyl,  
cyclopropyl, cyclopentyl and cyclohexyl;

$\text{R}^{10}$ , at each occurrence, is independently selected from H,  
 $\text{C}_{1-4}$  alkyl,  $(\text{CH}_2)_r\text{C}_{3-6}$  cycloalkyl,  $(\text{CH}_2)_r\text{NR}^{10a}\text{R}^{10a}$ ,  
10  $(\text{CH}_2)_r\text{OH}$ ,  $(\text{CH}_2)_r\text{OR}^{10b}$ ,  $(\text{CH}_2)_r\text{C}(\text{O})\text{OH}$ ,  $(\text{CH}_2)_r\text{C}(\text{O})\text{R}^{10b}$ ,  
 $(\text{CH}_2)_r\text{C}(\text{O})\text{NR}^{10a}\text{R}^{10a}$ ,  $(\text{CH}_2)_r\text{NR}^{10d}\text{C}(\text{O})\text{R}^{10a}$ ,  
 $(\text{CH}_2)_r\text{S}(\text{O})_2\text{NR}^{10a}\text{R}^{10a}$ ,  $(\text{CH}_2)_r\text{NR}^{10d}\text{S}(\text{O})_2\text{R}^{10b}$ , and  
 $(\text{CH}_2)_t\text{phenyl}$  substituted with 0-3  $\text{R}^{10c}$ ;

15  $\text{R}^{10a}$  and  $\text{R}^{10a}$ , at each occurrence, are selected from H,  
methyl, ethyl, propyl, i-propyl, butyl, cyclopropyl,  
cyclopentyl, cyclohexyl, and phenyl;

$\text{R}^{10b}$ , at each occurrence, is independently selected from  
20 methyl, ethyl, propyl, i-propyl, butyl, cyclopropyl,  
cyclopentyl, cyclohexyl, and phenyl;

$\text{R}^{10c}$ , at each occurrence, is independently selected from  
 $\text{C}_{1-10}$  alkyl,  $\text{C}_{3-6}$  cycloalkyl, Cl, F, Br, I, CN,  $\text{NO}_2$ ,  
25  $(\text{CF}_2)_r\text{CF}_3$ ,  $(\text{CH}_2)_r\text{OC}_{1-5}$  alkyl,  $(\text{CH}_2)_r\text{OH}$ ,  $(\text{CH}_2)_r\text{SC}_{1-5}$   
alkyl, and  $(\text{CH}_2)_r\text{NR}^{10d}\text{R}^{10d}$ ; and

$\text{R}^{10d}$ , at each occurrence, is independently selected from  
H, methyl, ethyl, propyl, i-propyl, butyl,  
30 cyclopropyl, cyclopentyl, and cyclohexyl.

5. The compound of claim 4, wherein

$R^3$  is selected from a  $(CR^{3'}H)_r$ - $C_{3-8}$  carbocyclic residue  
 5 substituted with 0-5  $R^{15}$ , wherein the carbocyclic  
 residue is selected from phenyl, naphthyl, and  
 adamantyl; and a  $(CR^{3'}H)_r$ -heterocyclic system  
 substituted with 0-3  $R^{15}$ , wherein the heterocyclic  
 system is selected from pyridinyl, thiophenyl,  
 10 furanyl, indazolyl, benzothiazolyl, benzimidazolyl,  
 benzothiophenyl, benzofuranyl, benzoxazolyl,  
 benzisoxazolyl, quinolinyl, isoquinolinyl,  
 imidazolyl, indolyl, indolinyl, indazolyl,  
 isoindolyl, isothiadiazolyl, isoxazolyl,  
 15 piperidinyl, pyrrazolyl, 1,2,4-triazolyl, 1,2,3-  
 triazolyl, tetrazolyl, thiadiazolyl, thiazolyl,  
 oxazolyl, pyrazinyl, and pyrimidinyl; and

$R^{5a}$  is selected from phenyl substituted with 0-5  $R^{16}$ ; and  
 20 a heterocyclic residue substituted with 0-3  $R^{16}$ ,  
 wherein the heterocyclic system is selected from  
 pyridinyl, thiophenyl, furanyl, indazolyl,  
 benzothiazolyl, benzimidazolyl, benzothiophenyl,  
 benzofuranyl, benzoxazolyl, benzisoxazolyl,  
 25 quinolinyl, isoquinolinyl, imidazolyl, indolyl,  
 indolinyl, isoindolyl, isothiadiazolyl, isoxazolyl,  
 piperidinyl, pyrrazolyl, 1,2,4-triazolyl, 1,2,3-  
 triazolyl, tetrazolyl, thiadiazolyl, thiazolyl,  
 oxazolyl, pyrazinyl, and pyrimidinyl;

30

$R^8$  is selected from H,  $C_{1-6}$  alkyl,  $C_{2-8}$  alkenyl,  $C_{2-8}$   
 alkynyl,  $(CH_2)_rC_{3-6}$  cycloalkyl,  $(CF_2)_rCF_3$ ,

$(\text{CH}_2)_r\text{N}(\text{R}^{18a})\text{R}^{18b}$ ,  $(\text{CH}_2)_r\text{OH}$ ,  $(\text{CH}_2)_r\text{OR}^{19}$ ,  $(\text{CH}_2)_r\text{SH}$ ,  
 $(\text{CH}_2)_r\text{SR}^{19}$ ,  $(\text{CH}_2)_r\text{C}(\text{O})\text{OH}$ ,  $(\text{CH}_2)_r\text{C}(\text{O})\text{R}^{19}$ ,  
 $(\text{CH}_2)_r\text{C}(\text{O})\text{N}(\text{R}^{18a})\text{R}^{18b}$ ,  $(\text{CH}_2)_r\text{N}(\text{R}^{18c})\text{C}(\text{O})\text{R}^{19}$ ,  
 $(\text{CH}_2)_r\text{C}(\text{O})\text{OR}^{19}$ ,  $(\text{CH}_2)_r\text{OC}(\text{O})\text{R}^{19}$ ,  $(\text{CH}_2)_r\text{S}(\text{O})\text{R}^{19}$ ,  
5  $(\text{CH}_2)_r\text{S}(\text{O})_2\text{R}^{19}$ ,  $(\text{CH}_2)_r\text{S}(\text{O})_2\text{N}(\text{R}^{18a})\text{R}^{18b}$ ,  
 $(\text{CH}_2)_r\text{N}(\text{R}^{18c})\text{S}(\text{O})_2\text{R}^{19}$ , a  $(\text{C}(\text{R}^{8a})(\text{R}^{8b}))_r\text{-C}_3\text{-10}$   
carbocyclic residue substituted with 0-5  $\text{R}^{17}$ , and a  
 $(\text{C}(\text{R}^{8a})(\text{R}^{8b}))_r\text{-5-10}$  membered heterocyclic system  
containing 1-4 heteroatoms selected from N, O, and  
10 S, substituted with 0-3  $\text{R}^{17}$ , wherein the heterocyclic  
system is selected from pyridinyl, thiophenyl,  
furanlyl, indazolyl, benzothiazolyl, benzimidazolyl,  
benzothiophenyl, benzofuranlyl, benzoxazolyl,  
15 benzisoxazolyl, quinolinyl, isoquinolinyl,  
imidazolyl, indolyl, indolinyl, isoindolyl,  
isothiadiazolyl, isoxazolyl, piperidinyl,  
pyrrazolyl, 1,2,4-triazolyl, 1,2,3-triazolyl,  
tetrazolyl, thiadiazolyl, thiazolyl, oxazolyl,  
pyrazinyl, and pyrimidinyl;  
20  
 $\text{R}^{8a}$  and  $\text{R}^{8b}$ , at each occurrence, are independently  
selected from H, methyl, ethyl, propyl, i-propyl,  
butyl, cyclopropyl, cyclopentyl, cyclohexyl, and  
 $(\text{CH}_2)_r$  phenyl substituted with 0-3  $\text{R}^{18}$ ;  
25  
 $\text{R}^9$  is selected from H,  $\text{C}_{1-6}$  alkyl,  $\text{C}_{2-8}$  alkenyl,  $\text{C}_{2-8}$   
alkynyl,  $(\text{CH}_2)_r\text{C}_3\text{-6}$  cycloalkyl,  $(\text{CF}_2)_r\text{CF}_3$ ,  
 $(\text{CH}_2)_q\text{N}(\text{R}^{18a})\text{R}^{18b}$ ,  $(\text{CH}_2)_q\text{OH}$ ,  $(\text{CH}_2)_q\text{OR}^{19}$ ,  $(\text{CH}_2)_q\text{SH}$ ,  
 $(\text{CH}_2)_q\text{SR}^{19}$ ,  $(\text{CH}_2)_q\text{C}(\text{O})\text{OH}$ ,  $(\text{CH}_2)_q\text{C}(\text{O})\text{R}^{19}$ ,  
30  $(\text{CH}_2)_q\text{C}(\text{O})\text{N}(\text{R}^{18a})\text{R}^{18b}$ ,  $(\text{CH}_2)_q\text{N}(\text{R}^{18c})\text{C}(\text{O})\text{R}^{19}$ ,

$(\text{CH}_2)_q\text{C}(\text{O})\text{OR}^{19}$ ,  $(\text{CH}_2)_q\text{OC}(\text{O})\text{R}^{19}$ ,  $(\text{CH}_2)_q\text{S}(\text{O})\text{R}^{19}$ ,  
 $(\text{CH}_2)_q\text{S}(\text{O})_2\text{R}^{19}$ ,  $(\text{CH}_2)_q\text{S}(\text{O})_2\text{N}(\text{R}^{18a})\text{R}^{18b}$ ,  
 $(\text{CH}_2)_q\text{N}(\text{R}^{18c})\text{S}(\text{O})_2\text{R}^{19}$ , a  $(\text{C}(\text{R}^{8a})(\text{R}^{8b}))_r\text{-C}_{3-10}$   
carbocyclic residue substituted with 0-5  $\text{R}^{17}$ , and a  
5  $(\text{C}(\text{R}^{8a})(\text{R}^{8b}))_r\text{-5-10}$  membered heterocyclic system  
containing 1-4 heteroatoms selected from N, O, and  
S, substituted with 0-3  $\text{R}^{17}$ , wherein the heterocyclic  
system is selected from pyridinyl, thiophenyl,  
furanyl, indazolyl, benzothiazolyl, benzimidazolyl,  
10 benzothiophenyl, benzofuranyl, benzoxazolyl,  
benzisoxazolyl, quinolinyl, isoquinolinyl,  
imidazolyl, indolyl, indolinyl, isoindolyl,  
isothiadiazolyl, isoxazolyl, piperidinyl,  
pyrrazolyl, 1,2,4-triazolyl, 1,2,3-triazolyl,  
15 tetrazolyl, thiadiazolyl, thiazolyl, oxazolyl,  
pyrazinyl, and pyrimidinyl;

alternatively,  $\text{R}^8$  and  $\text{R}^9$  taken together are selected from  
 $=\text{O}$ ,  $=\text{S}$ ,  $=\text{NR}^{9a}$ ;

20  $\text{R}^{9a}$  is selected from H,  $\text{C}_{1-6}$  alkyl,  $\text{C}_{2-8}$  alkenyl,  $\text{C}_{2-8}$   
alkynyl,  $(\text{CH}_2)_r\text{C}_{3-6}$  cycloalkyl,  $(\text{CH}_2)_r\text{OH}$ ,  $(\text{CH}_2)_r\text{OC}_{1-6}$   
alkyl,  $(\text{CH}_2)_r\text{C}(\text{O})\text{R}^{19}$ ,  $(\text{CH}_2)_r\text{C}(\text{O})\text{N}(\text{R}^{18a})\text{R}^{18b}$ ,  
 $(\text{CH}_2)_r\text{C}(\text{O})\text{OR}^{19}$ , and  $(\text{CH}_2)_r\text{phenyl}$  substituted with 0-3  
25  $\text{R}^{17}$ ; and

$\text{R}^{9b}$ , at each occurrence are independently selected from H,  
 $\text{C}_{1-6}$  alkyl,  $\text{C}_{2-8}$  alkenyl,  $\text{C}_{2-8}$  alkynyl,  $(\text{CH}_2)_r\text{C}_{3-6}$   
cycloalkyl,  $(\text{CF}_2)_r\text{CF}_3$ ,  $(\text{CH}_2)_r\text{N}(\text{R}^{18a})\text{R}^{18b}$ ,  $(\text{CH}_2)_r\text{OH}$ ,  
30  $(\text{CH}_2)_r\text{OR}^{19}$ ,  $(\text{CH}_2)_r\text{SH}$ ,  $(\text{CH}_2)_r\text{SR}^{19}$ ,  $(\text{CH}_2)_r\text{C}(\text{O})\text{OH}$ ,

$(\text{CH}_2)_r\text{C}(\text{O})\text{R}^{19}$ ,  $(\text{CH}_2)_r\text{C}(\text{O})\text{N}(\text{R}^{18a})\text{R}^{18b}$ ,  
 $(\text{CH}_2)_r\text{N}(\text{R}^{18c})\text{C}(\text{O})\text{R}^{19}$ ,  $(\text{CH}_2)_r\text{C}(\text{O})\text{OR}^{19}$ ,  $(\text{CH}_2)_r\text{OC}(\text{O})\text{R}^{19}$ ,  
 $(\text{CH}_2)_r\text{S}(\text{O})\text{R}^{19}$ ,  $(\text{CH}_2)_r\text{S}(\text{O})_2\text{R}^{19}$ ,  $(\text{CH}_2)_r\text{S}(\text{O})_2\text{N}(\text{R}^{18a})\text{R}^{18b}$ ,  
 $(\text{CH}_2)_r\text{N}(\text{R}^{18c})\text{S}(\text{O})_2\text{R}^{19}$ , and  $(\text{CH}_2)_r\text{phenyl}$  substituted  
 5 with 0-3  $\text{R}^{17}$ .

6. The compound of claim 5, wherein

10  $\text{R}^1$  and  $\text{R}^2$  are H;

$\text{R}^{5a}$  is phenyl substituted with 1-3  $\text{R}^{16}$ ;

$\text{R}^{16}$ , at each occurrence, is independently selected from  
 $\text{C}_{1-8}$  alkyl,  $(\text{CH}_2)_r\text{C}_{3-6}$  cycloalkyl,  $\text{CF}_3$ , Cl, Br, I, F,  
 15  $\text{NR}^{16a}\text{R}^{16a}$ ,  $\text{NO}_2$ , CN, OH,  $\text{OR}^{16d}$ ,  $\text{C}(\text{O})\text{R}^{16b}$ ,  $\text{C}(\text{O})\text{NR}^{16a}\text{R}^{16a}$ ,  
 and  $\text{NR}^{16f}\text{C}(\text{O})\text{R}^{16b}$ ;

$\text{R}^{16a}$ , at each occurrence, is independently selected from  
 H, methyl, ethyl, propyl, i-propyl, butyl,  
 20 cyclopropyl, cyclopentyl, cyclohexyl, and  
 $(\text{CH}_2)_r\text{phenyl}$  substituted with 0-3  $\text{R}^{16e}$ ;

$\text{R}^{16b}$ , at each occurrence, is independently selected from  
 methyl, ethyl, propyl, i-propyl, butyl, cyclopropyl,  
 25 cyclopentyl, cyclohexyl, and  $(\text{CH}_2)_r\text{phenyl}$  substituted  
 with 0-3  $\text{R}^{16e}$ ;

$\text{R}^{16d}$ , at each occurrence, is independently selected from  
 methyl, ethyl, propyl, i-propyl, butyl, and phenyl;  
 30

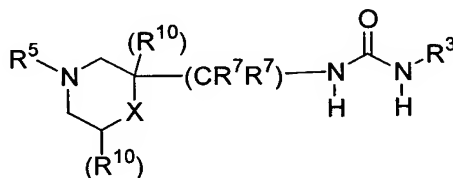


$R^{16e}$ , at each occurrence, is independently selected from methyl, ethyl, propyl, i-propyl, butyl, Cl, F, Br, I, CN,  $NO_2$ ,  $(CF_2)_rCF_3$ , OH, and  $(CH_2)_rOC_{1-5}$  alkyl; and

5  $R^{16f}$ , at each occurrence, is independently selected from H, methyl, ethyl, propyl, i-propyl, and butyl.

7. The compound of claim 6, wherein the compound is of formula (I-i)

10



(I-i);

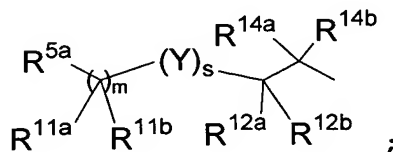
$R^{10}$  is selected from H, methyl, ethyl, propyl, i-propyl, butyl, OH, and  $OR^{10b}$ ; and

15

$R^{10b}$  is selected from methyl, ethyl, propyl, i-propyl, and butyl.

8. The compound of claim 7, wherein

20  $R^5$  is



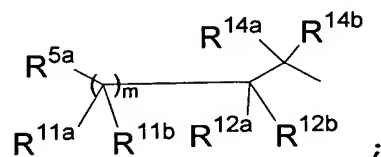
25  $R^{11a}$  and  $R^{12a}$ , at each occurrence are independently selected from H, methyl, ethyl, propyl, i-propyl, butyl, pentyl, hexyl, cyclopropyl, cyclopentyl, cyclohexyl,  $CF_3$ ,  $(CH_2)_rN(R^{18a})R^{18b}$ ,  $(CH_2)_rOH$ ;

R<sup>11b</sup>, R<sup>12b</sup>, R<sup>14a</sup> and R<sup>14b</sup> at each occurrence are  
independently selected from H, methyl, ethyl,  
propyl, i-propyl, butyl, pentyl, hexyl, cyclopropyl,  
5 cyclopentyl, cyclohexyl, CF<sub>3</sub>, (CH<sub>2</sub>)<sub>r</sub>N(R<sup>18a</sup>)R<sup>18b</sup>,  
(CH<sub>2</sub>)<sub>r</sub>OH;

R<sup>25</sup> at each occurrence is independently selected from H,  
methyl, ethyl, propyl, i-propyl, butyl, cyclopropyl,  
10 cyclopentyl, cyclohexyl, (CH<sub>2</sub>)<sub>r</sub>C(O)R<sup>19</sup>,  
(CH<sub>2</sub>)<sub>r</sub>C(O)N(R<sup>18a</sup>)R<sup>18b</sup>, (CH<sub>2</sub>)<sub>r</sub>C(O)OR<sup>19</sup>, and (CH<sub>2</sub>)<sub>r</sub>phenyl  
substituted with 0-3 R<sup>17</sup>.

9. The compound of claim 8, wherein  
15

R<sup>5</sup> is



20 R<sup>7</sup>, at each occurrence, is selected from H, methyl,  
ethyl, propyl, i-propyl, butyl, (CH<sub>2</sub>)<sub>q</sub>OH;

R<sup>11a</sup> and R<sup>12a</sup>, at each occurrence, are independently  
selected from H, methyl, and ethyl;

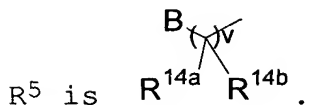
25

R<sup>11b</sup>, R<sup>12b</sup>, R<sup>14a</sup>, and R<sup>14b</sup>, at each occurrence, are  
independently selected from H, methyl, ethyl and OH;  
and

R16, at each occurrence, is independently selected from methyl, Cl, F, CF<sub>3</sub>, and CN.

10. The compound of claim 7, wherein

5



11. The compound of claim 9, wherein R<sup>8</sup> and R<sup>9</sup> do not both equal H.

10

12. The compound of claim 1, wherein the compound is selected from the compounds of Table 1 or

15 1-{1-[3-(4-fluorophenyl)-2,2-dimethylpropyl]-piperidin-3-ylmethyl}-3-[3-(1-methyl-1H-tetrazol-5-yl)-phenyl]-urea;

1-{1-[3-(4-fluorophenyl)-propyl]-piperidin-3-ylmethyl}-3-[3-(1-methyl-1H-tetrazol-5-yl)-phenyl]-urea;

20

1-[3-(1-methyl-1H-tetrazol-5-yl)-phenyl]-3-{1-[2-(4-trifluoromethylphenyl)-ethyl]-piperidin-3-ylmethyl}-urea;

25 1-(5-acetyl-4-methylthiazol-2-yl)-3-{1-[2-(4-fluorophenyl)ethyl]-piperidin-3-ylmethyl}urea;

1-[3-ethyl-5-(1-methyl-1H-tetrazol-5-yl)phenyl]-3-{trans-1-[2-(4-fluorophenyl)-ethyl]-4-methylpiperidin-3-ylmethyl}-urea;

30

- 1-[3-(1-methyl-1H-tetrazol-5-yl)phenyl]-3-{cis-1-[2-(4-fluorophenyl)-ethyl]-4-methylpiperidin-3-ylmethyl}-urea;
- 5 trans-1-{4-(benzyl-methylamino)-1-[2-(4-fluorophenyl)-ethyl]-piperidin-3-ylmethyl}-3-[3-ethyl-5-(1-methyl-1H-tetrazol-5-yl)-phenyl]-urea;
- trans-1-{4-methylamino-1-[2-(4-fluorophenyl)-ethyl]-piperidin-3-ylmethyl}-3-[3-ethyl-5-(1-methyl-1H-tetrazol-5-yl)-phenyl]-urea;
- 10 trans-N-{3-{3-[3-ethyl-5-(1-methyl-1H-tetrazol-5-yl)-phenyl]-ureidomethyl}-1-[3-(4-fluoro-phenyl)-propyl]-piperidin-4-yl}-N-methyl-acetamide;
- 15 trans-N-{3-{3-[3-ethyl-5-(1-methyl-1H-tetrazol-5-yl)-phenyl]-ureidomethyl}-1-[3-(4-fluoro-phenyl)-propyl]-piperidin-4-yl}-N-methyl-methanesulfonamide;
- 20 (S)-1-[3-ethyl-5-(1-methyl-1H-tetrazol-5-yl)-phenyl]-3-{1-[2-(4-fluorophenyl)-2-oxo-ethyl]-piperidin-3-ylmethyl}-urea;
- 25 (S)-1-[3-ethyl-5-(1-methyl-1H-tetrazol-5-yl)-phenyl]-3-{1-[2-(4-fluorophenyl)-2-hydroxyimino-ethyl]-piperidin-3-ylmethyl}-urea;
- 1-[3-ethyl-5-(1-methyl-1H-tetrazol-5-yl)-phenyl]-3-{1-[2-(4-fluorophenyl)-2-(RS)-hydroxyethyl]- (S)-piperidin-3-ylmethyl}-urea;
- 30

(S)-1-[3-ethyl-5-(1-methyl-1H-tetrazol-5-yl)-phenyl]-3-{1-[2-(4-fluorophenyl)-ethyl]-piperidin-3-ylmethyl}-urea;

5 1-[3-ethyl-5-(1-methyl-1H-tetrazol-5-yl)phenyl]-3-{1-[2-(4-fluorophenyl)-ethyl]-4-ethylpiperidin-3-ylmethyl}-urea; and

10 1-[3-ethyl-5-(1-methyl-1H-tetrazol-5-yl)phenyl]-3-{1-[2-(4-fluorophenyl)-ethyl]-4,4-dimethylpiperidin-3-ylmethyl}-urea.

13. A pharmaceutical composition, comprising a pharmaceutically acceptable carrier and a therapeutically effective amount of a compound according to Claim 1.

14. A method for modulation of chemokine receptor activity comprising administering to a patient in need thereof a therapeutically effective amount of a compound according to Claim 1.

15. A method for treating asthma, comprising administering to a patient in need thereof a therapeutically effective amount of a compound according to Claim 1.

16. A pharmaceutical composition comprising a pharmaceutically acceptable carrier and a therapeutically effective amount of a compound according to Claim 1, or a pharmaceutically acceptable salt thereof.

17. A pharmaceutical composition comprising a pharmaceutically acceptable carrier and a therapeutically

effective amount of a compound according to Claim 16, or a pharmaceutically acceptable salt thereof.

18. The method of claim 17 wherein modulation of  
5 chemokine receptor activity comprises contacting a CCR3 receptor with an effective inhibitory amount of the compound.

19. A method for treating inflammatory disorders  
10 comprising administering to a patient in need thereof a therapeutically effective amount of a compound according to Claim 1, or a pharmaceutically acceptable salt thereof.

20. A method according to Claim 19, wherein the  
15 disorder is selected from asthma, allergic rhinitis, atopic dermatitis, inflammatory bowel diseases, idiopathic pulmonary fibrosis, bullous pemphigoid, helminthic parasitic infections, allergic colitis,  
20 eczema, conjunctivitis, transplantation, familial eosinophilia, eosinophilic cellulitis, eosinophilic pneumonias, eosinophilic fasciitis, eosinophilic gastroenteritis, drug induced eosinophilia, HIV  
infection, cystic fibrosis, Churg-Strauss syndrome,  
25 lymphoma, Hodgkin's disease, and colonic carcinoma.

21. The method according to Claim 20, wherein the  
disorder is selected from asthma, allergic rhinitis, atopic dermatitis, and inflammatory bowel diseases.

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22. The method according to Claim 21, wherein the disorder is asthma.